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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,680	07/03/2001	Gary J. Ballantyne	010181	5827
23696	7590	12/30/2003	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			TOATLEY, GREGORY J	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

### Office Action Summary

Application No.

09/898,680

Applicant(s)

BALLANTYNE ET AL.

Examiner

Gregory J. Toatley, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-13 and 17-21 is/are rejected.
- 7) ☒ Claim(s) 6-8, 14-16 and 22-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 040203.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement received April 2, 2003 has been considered and entered into the application. See attached 1449.

### ***Specification***

2. The examiner respectfully suggests that the Applicant carefully review the specification for idiomatic and grammatical errors, which may have inadvertently overlooked.

### ***Art Rejection Rationale***

At the outset, the examiner notes that claims are to be given their broadest reasonable interpretation during prosecution. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); In re Prater, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA 1969); In re Yamamoto, 740 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984); Burlington Indus. V. Quigg, 822 F.2d 1581, 3 USPQ2d 1436 (Fed. Cir. 1987); In re Morris, 43 USPQ2d 1753, 1756 (Fed. Cir. 1997). In responding to this Office action, applicants are reminded of the requirements of 37 CFR §§ 1.111 and 1.119 that applicants specifically point out the specific distinctions believed to render the claims patentable over the references in presenting responsive arguments. See M.P.E.P. § 714.02. The support for any amendments made should also be specifically pointed out. See M.P.E.P. § 2163.06.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 4, 9 – 13, and 17 – 21 are rejected under 35 U.S.C. 102(b) as being anticipated by the reference of Huen et al. (US 5686813 A). The reference of Huen et al. discloses the claimed invention as follows:

1. An reduced-average-power electronic circuit (**fig. 2**) comprising: a power source (**battery, 12**); a switch mode power supply (SMPS) powered by the power source (**the combination of switch 21, and controller 23**), the SMPS having a capacity which is lower than the maximum power requirement for the hereafter-recited load (**see the description of the power saving mode at least 3:16-48**); a load (**mobile phone, 100**), powered by the SMPS, having a requirement for varying amounts of power (**depending on the use of the phone and its RX signal strength**), the power having low noise during high power conditions and the load tolerating a low voltage during low power conditions (**inherent functions of the battery and the phone in that during high power conditions the battery is connected directly to the mobile phone, thus the SWMP is not in use and there is not any noise from the switching thereof and during the standby mode of the mobile phone a low voltage power source is acceptable**); and means (**via switch 22**) for applying power from the power source to the load without passing through the SMPS when the applied power is higher than a threshold, the threshold being lower than or equal to the capacity of the SMPS .

2. The electronic circuit of claim 1, wherein the power source comprises a battery (**12**).

3. The electronic circuit of claim 1, wherein the load comprises a transceiver power amplifier (**an inherent element in mobile phones in order to ensure that the phone can maintain a connection to the network with fluctuating environmental conditions**).

4. The electronic circuit of claim 1 wherein the means for applying power from the power source to the load without passing through the SMPS comprises a switch (**22**) in parallel with the SMPS.

5. The electronic circuit of claim 4, wherein the switch is coupled to a controller which is structured to close the switch when the applied power is higher than the threshold and to open the switch when the applied power is lower than the threshold (**see 3:5-15; and 4:3-9, 48-58**).

9. A method for supplying a reduced average power to a load, comprising the steps of: powering a switch mode power supply (SMPS) with a power source; powering the load with

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the SMPS; and applying power from the power source to the load without passing through the SMPS when the applied power is higher than a threshold; wherein: the load has a requirement for varying amounts of power; the power source has low noise during high power conditions and the load tolerating a low voltage during low power conditions; the SMPS has a capacity which is lower than the maximum power requirement for the load; and the threshold is lower than or equal to the capacity of the SMPS (**see comments regarding claim 1**).

10. The method of claim 9, wherein the power source comprises a battery (**see comments regarding claim 2**).

11. The method of claim 9, wherein the load comprises a transceiver power amplifier (**see comments regarding claim 3**).

12. The method of claim 9, wherein the step of applying power from the power source to the load without passing through the SMPS comprises the step of closing a switch in parallel with the SMPS (**see comments regarding claim 4**).

13. The method of claim 12, wherein the step of closing the switch is preceded by the step of actuating a controller that is coupled to the switch, and which is actuated when the applied power is higher than the threshold (**see comments regarding claim 5**).

17. Apparatus for supplying a reduced average power to a load, comprising: means for powering a switch mode power supply (SMPS) with a power source; means for powering the load with the SMPS; and means for applying power from the power source to the load without passing through the SMPS when the applied power is higher than a threshold; wherein: the load has a requirement for varying amounts of power; the load tolerates a low voltage during low power conditions; the power source has low noise during high power conditions; the SMPS has a capacity which is lower than the maximum power requirement for the load; and the threshold is lower than or equal to the capacity of the SMPS (**see comments regarding claim 1**).

18. The apparatus of claim 17, wherein the power source comprises a battery (**see comments regarding claim 2**).

19. The apparatus of claim 17, wherein the load comprises a transceiver power amplifier (**see comments regarding claim 3**).

20. The apparatus of claim 17, wherein the means for applying power from the power source to the load without passing through the SMPS comprises means for closing a switch in parallel with the SMPS (**see comments regarding claim 4**).

21. The apparatus of claim 20, wherein the means for closing the switch is coupled to preceding means for actuating a controller which is coupled to the switch, and which is actuated when the applied power is higher than the threshold (**see comments regarding claim 5**).

### ***Allowable Subject Matter***

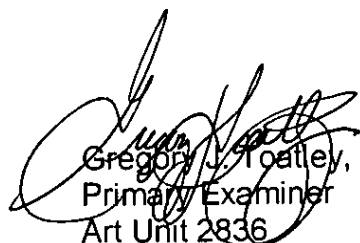
5. Claims 6, 7, 14, 15, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims. Prior art of record does not teach or suggest the delay of the closing of the switch as claimed in claim 6, 14, and 22; and the hysteresis between the opening and closing of the switch as claimed in claims 7, 15, and 23 in combination with the elements claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Toatley, Jr. whose telephone number is 703-308-7889. The examiner can normally be reached on Mon. - Fri. 7:00 a.m. to 3 p.m.. After January 28, 2004, the examiner can be reached at (571) 272-2059.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703) 308-3119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Gregory J. Toatley, Jr.  
Primary Examiner  
Art Unit 2836

GJT Jr.